

# **Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units (CISWI)**

## **Request for Comment on Proposed Rule (June 9, 2010)**

### **Introduction:**

On June 9, EPA published a proposed rule in the Federal Register ([75 FR 31938](#)) which would reduce emissions from commercial and industrial solid waste incinerators. An incinerator unit covered under this rule is any device used to burn solid waste at a commercial or industrial facility. This document highlights the specific issues that EPA is interested in receiving additional comments on. Comment period for rule ends August 3, 2010.

### **What parts of the proposed rule might be of interest to me or my community?**

We invite comments on all issues involved with this proposed rule. Here is a list of some of the key issues and *specific requests for comment* from the Federal Register notice. The specific requests for comment are in bullet form and in italics. Each specific request for comment is followed by a page number showing where it is located in the Federal Register.

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### **Establishing Emission Limits**

This proposed rule identifies five CISWI subcategories based on design type: incinerators; energy recovery units; waste-burning kilns; burn-off ovens; and small, remote incinerators. The rule proposes limits for nine pollutants under each subcategory.

We are asking for comment on several issues related to how we propose to set emission levels for new and existing solid waste incineration units. Section 129(a)(2) of the Clean Air Act (CAA) requires us to set emissions standards for hazardous air pollutants (HAP) emitted by new and existing solid waste incineration units based on the performance of the maximum achievable control technology (MACT). The MACT standards for existing sources must be at least as stringent as the average emissions limitation achieved by the best performing 12 percent of existing sources for each pollutant and subcategory. This level of minimum stringency is called the MACT floor. For new and reconstructed sources, MACT standards must be at least as

stringent as the control level achieved in practice by the best controlled similar source for each pollutant and subcategory.

For existing units, we ranked individual CISWI units based on actual performance and established MACT floors based on the average of the best performing 12 percent of sources for each pollutant and subcategory, with an appropriate accounting for emissions variability. Once identified, the individual test run data for these best performing 12 percent of units were compiled and analyzed for variability. For the variability analysis, we first conducted statistical analyses to determine whether the data used for the MACT floor calculation had a normal or log-normal distribution followed by calculation of the average and the 99th percent upper limit (UL). The UL represents a value that 99 percent of the data in the MACT floor data population would fall below. For new sources, we used a UL calculation using the best performing unit within a subcategory's data for each pollutant to calculate the MACT floor limit (similar to the analysis for existing units, only using the data from the best unit instead of the best 12 percent of units).

While we used the UL to calculate the proposed MACT floor limits, as some other rulemakings have, there are statistical intervals other than UL that could be considered in calculating the MACT floor limits, such as the upper prediction limit (UPL). In general, a prediction interval (e.g., a UPL) is useful in determining what future values are likely to be, based upon present or past background samples taken. The 99 percent UPL represents the value that one can expect the mean of future 3-run performance tests from the best-performing 12 percent of sources to fall below with 99 percent confidence.

- *Should MACT standards be established by using an alternative statistical method to set floor emission limits? (75 FR 31943)*

Using the data set available for dioxins/furans toxic equivalents (TEQ) basis and the upper limit statistical approach, sometimes upper limits calculated for TEQ were greater than those calculated for the dioxins/furans total mass basis. Dioxins/furans TEQ values should correlate to the total mass basis value at a ratio of less than 1 (a 1-to-1 ratio is the theoretical maximum). Therefore, we calculated a ratio of TEQ to total mass basis of 0.078 and multiplied this ratio to the total mass basis to establish dioxins/furans TEQ emission limits.

- *We request comment on this approach for establishing the dioxins/furans TEQ basis limits. (75 FR 31954)*

The database for this rule includes emissions that occur below the method detection capabilities of measuring devices. These data are reported as the method detection level values and therefore the variability of the emissions data is understated.

- *What approach should we use to account for measurement variability in establishing the MACT floor when based on measurements at or near the method detection level? (75 FR 31944)*

New source MACT floors are based on the best performing single source for each regulated pollutant, with an appropriate accounting for emissions variability. For some subcategories of CISWI units, we had limited data, which changed the way we set the MACT floor for those subcategories. For example, there was one case where the best-performing source in the burn-off oven subcategory reported zero for each test run for SO<sub>2</sub>. This value does not give any allowance for value variability. To address this, EPA used test data for the next best-performing source (i.e., the lowest emitting source with non-zero test data).

- *We are asking for comment on this approach to setting the floor limit. (75 FR 31955)*
- *Should MACT standards be established by using an alternative statistical method to set floor emission limits? (75 FR 31955)*

We are proposing opacity standards for new and existing CISWI units. Because opacity can be affected by the amount, type and particle characteristics of PM in the gas stream, as well as process operation, we believe that opacity is an appropriate surrogate for PM emissions. We believe that using a ratio of PM to opacity is an appropriate method for determining the opacity that would be associated with a given PM concentration.

- *Is this a reasonable approach to establishing opacity limits while accounting for data variability?*
- *What additional opacity information should be utilized in establishing opacity limits?*
- *Is it appropriate to set opacity limits for CISWI units? (75 FR 31956)*

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### Beyond-the-floor Control Options

We must consider stringent “beyond-the-floor” control options, which are more stringent than the MACT floor. When considering beyond-the-floor options, we consider not only the maximum degree of reduction in emissions of HAP, but also costs, energy, and non-air quality health and environmental impacts.

- *We are asking for comments on all aspects of the beyond-the-floor analysis, including whether there are combinations of control approaches that would cost-effectively reduce emissions of the Section 129(a)(4) pollutants (i.e., particulate matter, carbon monoxide, dioxins/furans, sulfur dioxide, nitrogen oxides, hydrogen chloride, lead, mercury, and cadmium). We specifically request that the commenter provide cost, technical and other relevant information in support of any beyond-the-floor alternatives. (75 FR 31956)*

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### Exemptions to CISWI Rule

In the 2000 CISWI rule, there were 15 types of units that were exempted from regulation under CISWI. We are proposing to remove some of the exemptions contained in the 2000 CISWI rule. We propose to maintain the statutory exemptions and the exemptions for units that are covered by other standards issued under CAA section 129.

- *We are asking for comment on the scope of the proposed exemptions for units subject to CAA Section 129 standards. (75 FR 31959, 75 FR 31960)*

Air curtain incinerators combusting “clean wood” are exempt by statute from the definition of solid waste incineration unit.

- *We are asking for comment on whether air curtain incinerators combusting “clean wood” should be required to obtain title V permits. (75 FR 31960)*

We are considering amending the exemption provisions at 40 CFR 60.2020 and 60.2555 to remove all references to units that are statutorily exempt from the definition of solid waste incineration unit. If we took such action, we would develop a new section to retain the notification requirements contained in those sections and applicable to such statutorily exempt units.

- *Do you agree with this proposed approach? (75 FR 31960)*

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### Compliance Assurance

This proposed rule requires all CISWI units to demonstrate initial compliance with revised emission limits and adhere to testing, monitoring, and continuous compliance requirements (annual inspections, bag leak detection and parametric monitoring requirements). Subcategory-specific monitoring requirements are also required.

The proposed rule requires Continuous Emissions Monitoring Systems (CEMS) for carbon monoxide for new sources and on existing energy recovery units. The proposal allows the use of carbon monoxide CEMS on existing sources. Owners and operators who use carbon monoxide CEMS would be able to discontinue their annual carbon monoxide compliance test. We believe that the continuous monitoring of carbon monoxide emissions is an effective way of ensuring that the combustion unit is operating properly.

- *Should continuous monitoring of carbon monoxide emissions be required for all existing CISWI units? (75 FR 31948, 75 FR 31961)*

The proposed rule requires existing energy recovery units with a heat input capacity greater than 250 MMBtu/hr to use particulate matter CEMS. The proposal allows the use of particulate matter CEMS as an alternative testing and monitoring method on other CISWI units. Owners or operators who are required to use, or choose to rely on, particulate matter CEMS would be able to discontinue their annual particulate matter compliance test.

- *Should continuous monitoring of particulate matter emissions be required on waste burning kilns, large incinerators, and energy recovery units of 100 MMBTU/hour design capacity or greater? (75 FR 31948, 75 FR 31962)*

We are also proposing the optional use of nitrogen oxide CEMS, sulfur dioxide CEMS, hydrochloric acid CEMS, multimetals CEMS, mercury CEMS, integrated sorbent trap mercury monitoring and integrated sorbent trap dioxin monitoring as alternatives to the existing monitoring methods for demonstrating compliance with the NO<sub>x</sub>, sulfur dioxide, hydrochloric acid, metals (lead, cadmium and mercury) and dioxin/furans emissions limits.

- *Is it appropriate to use multi-metals CEMS instead of initial performance tests coupled with PM CEMS and other surrogates? (75 FR 31962)*
- *We request comment on an alternate initial accuracy determination procedure, similar to the one in section 11 of PS-15 (performance specification for Extractive FTIR Continuous Emissions Monitor Systems in Stationary Sources) of appendix B of 40 CFR part 60 using the dynamic or analyte spiking procedure. (75 FR 31962)*
- *Are there any parameter monitoring requirements that could be eliminated upon use of any or all of the optional CEMS described in the proposed rule? (75 FR 31963)*

This proposal contains minimum data availability requirements for CEMS. The proposed rule requires valid emissions data for a minimum of 85 percent of the hours per day, 90 percent of the hours per calendar quarter, and 95 percent of the hours per calendar year that the affected facility is operating and combusting solid waste.

- *Should the rule require valid emissions data from CEMS for all times that an affected facility is operated?*
- *If so, what approaches would be needed to provide that data, e.g., redundant CEMS, prescribed missing data procedures, owner- or operator-developed missing data procedures, or parametric monitoring? (75 FR 31964)*

In the past, there has been some confusion about what authorities can be delegated and exercised by state, local and tribal air pollution control agencies and which authorities must be retained by EPA. We are proposing clarifications to the authorities that can be delegated or transferred to state, local and tribal air pollution control agencies in this rulemaking. There is a list of authorities that must be retained by EPA in 40 CFR 60.2530. EPA proposes to add to this list authorities that may affect the stringency of the emissions standards or limitations contained in the proposed rule.

- *We are seeking comment on authorities that should be retained by EPA or delegated to state, local or tribal air pollution control agencies. (75 FR 31965)*

The proposed amendments would allow sources to use the results of emissions tests conducted within the previous two years to demonstrate initial compliance with the revised emission limits as long as the sources certify that the previous test results are representative of current operations.

- *We seek comment on the appropriateness of using previously conducted performance tests to demonstrate initial compliance. (75 FR 31961)*

States will be required to submit plans to EPA for review and approval, which implement and enforce the guidelines for CISWI units. States and eligible tribes can choose instead to implement and enforce the federal plan for these units. We have proposed the requirements that must be met in order for states and eligible tribes to receive delegation of the federal plan.

- *We are seeking comment on this provision. (75 FR 31965)*

Based on the results of our analysis for existing units and our experiences with other CAA Section 129 regulations, we do not anticipate that any new CISWI units will be constructed. We believe that many existing CISWI owners and operators may find alternate disposal options preferable to compliance with the proposed standards.

- *Do you believe that any new CISWI sources are likely to be constructed? (75 FR 31966)*

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#### Relationship to Proposed Rule That Would Change the Definition of “Solid Waste”

We proposed a new definition of solid waste under the Resource Conservation and Recovery Act (RCRA) and have asked for comment on an alternative definition of solid waste as part of that proposed rule. The MACT floor limits presented in this proposed rule for CISWI units are based on the new definition of solid waste being proposed under RCRA. However, if we adopt the alternative definition of solid waste, the universe of facilities that would be subject to this CISWI MACT standard would change. For that reason, we developed information on what the MACT floor limits would be based on the universe of sources that would be subject to the CISWI MACT standard if the alternative definition of solid waste is adopted.

- *Are the MACT emission standards based on the alternative definition of solid waste appropriate? (75 FR 31956)*
- *Is it appropriate to exclude units from the CISWI MACT standards if they combust secondary materials not considered solid waste under the new definition of solid waste? (75 FR 31956)*

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#### Statutory and Executive Order Reviews

This proposed rule will not have a significant economic impact on a substantial number of small entities, including small businesses, small government organizations and small government jurisdictions.

- *We invite comments on all aspects of the proposal and its impacts on small entities. (75 FR 31971)*

This proposed rule does not have tribal implications, as specified in Executive Order 13175.

- *We specifically invite tribal officials to provide comment on this proposed rule. (75 FR 31972)*

This proposed rule does not have federalism implications because it will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132.

- *We specifically invite state and local officials to provide comment on this proposed rule. (75 FR 31972)*

According to Section 12(d) of the National Technology Transfer and Advancement Act of 1995, we need to use voluntary consensus standards (VCS) in our regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. We have decided to use ASME PTC 19.10-1981, “Flue and Exhaust Gas Analyses,” for its manual methods of measuring the oxygen or carbon dioxide content of the exhaust gas.

- *We are asking for comments on this aspect of the proposed rulemaking. We specifically ask the public to identify potentially-applicable voluntary consensus standards and to explain why such standards should be used in this regulation. (75 FR 31972)*

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